



Minnesota Pollution Control Agency

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Program
Support Section

EPA Region 5 Records Ctr.



387659

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PRELIMINARY ASSESSMENT
EXECUTIVE SUMMARY

Hader Ground Water Contamination

MND 981 961 873
September 1, 1987

Situation

The Hader Ground Water Contamination Site is located in Belle Creek and Minneola Townships in Goodhue County, Minnesota. The area of concern consists of several domestic farm wells which have tested high in: lead, nickel, iron and sulfate with associated low pH levels. In particular, three wells have tested above Minnesota Department of Health (MDH) Recommended Allowable Limits (RALs) for lead and nickel and have exceeded U.S. Environmental Protection Agency secondary Drinking Water Standards for iron and sulfate. These households are currently receiving bottled water under a Declaration of Emergency issued by the Minnesota Pollution Control Agency (MPCA). Sampling to date has included ten domestic wells in an attempt to define the presence of metal constituents and low pH in drinking water aquifers. Results indicate that elevated metal concentrations and low pH occur along a southwest to northeast trending line, approximately 1 to 1½ miles long.

There is much speculation as to the potential source(s) of the problem, yet no tangible evidence exists that would indicate a man-made source. If such a source exists, large quantities of waste would be required to account for the low pH found in area wells. Further investigatory work involving well sampling, assessment of probable cause(s) and the installation of monitoring wells are presently underway or in the planning stages.

Preliminary and potential Hazard Ranking System (HRS) scores have been calculated for the Site. The preliminary HRS score, based on presently available information and/or on estimates made by MPCA staff, is 25.05. The potential score, which the Site would receive only if releases of hazardous substances from the Site to ground water and surface water were documented, is 25.42.

Phone: _____

520 Lafayette Road, St. Paul, Minnesota 55155
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How Th

Inspection Recommendation

Additional ground water sampling is recommended to determine the geographic extent and concentrations of heavy metals and low pH present in the area of concern. Further interpretation of ground water chemistry data is necessary to determine the nature and possible source of compounds detected. A medium potential hazard assessment is recorded in Part 1.V. of the Preliminary Assessment because documented metal concentrations above MDH RALs have been detected in domestic wells. Until further investigatory work is completed, a determination of the nature and source of these compounds cannot be made. In conclusion, the MPCA staff recommend that the Site be assigned a medium priority for inspection because of the documented impacts to drinking water aquifers in the area.

#00430 TW



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

NEW
I. IDENTIFICATION

01 STATE Mn 02 SITE NUMBER

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Hader Groundwater Contamination		03 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER T110N, R16W, Section 5 T111N, R16W, Sections 28, 33 + 34			
03 CITY Hader	04 STATE Mn	05 ZIP CODE 55027	06 COUNTY Goodhue	07 COUNTY CODE 049	08 CONG DIST 1
09 COORDINATES LATITUDE 44° 22' 30.0"		LONGITUDE 292° 45' 00.0"			
10 DIRECTIONS TO SITE (Starting from nearest public road) From Zumbrota take Hwy. 52 North about 6 miles to Hwy. 50 go North 2 miles - take a right on Hwy. 50 go 1/4 to 1/2 mile east to Non-Responsive (first well identified with "bad" water).					

III. RESPONSIBLE PARTIES

01 OWNER (if known) UNKNOWN		02 STREET (Business mailing addresses)			
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER ()		
07 OPERATOR (if known and different from owner)		08 STREET (Business mailing addresses)			
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER ()		
13 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <u>Rural / Agricultural Area</u> <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input checked="" type="checkbox"/> F. OTHER <u>Private Property / Source Unknown</u> <input type="checkbox"/> G. UNKNOWN					
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply) <input type="checkbox"/> A. RCRA 3001 DATE RECEIVED: / / <input type="checkbox"/> B. UNCONTROLLED WASTE SITE (RCRA 102(c)) DATE RECEIVED: / / <input type="checkbox"/> C. NONE					

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE <u>06.1.87</u> <input type="checkbox"/> NO MONTH DAY YEAR		BY (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input checked="" type="checkbox"/> C. STATE <input checked="" type="checkbox"/> D. OTHER CONTRACTOR <input checked="" type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER <u>Culligan Water Service</u> CONTRACTOR NAME(S) <u>Mn. Pollution Control Agency + Mn. Dept. of Health</u>			
02 SITE STATUS (Check one) <input type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input checked="" type="checkbox"/> C. UNKNOWN		03 YEARS OF OPERATION BEGINNING YEAR: / / ENDING YEAR: / / <input checked="" type="checkbox"/> UNKNOWN			

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Acidic metal plating wastes may have been dumped in the area.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Three domestic wells have heavy metal concentrations Above Minnesota Department of Health's Recommended Allowable Limits for private water supplies. Other wells are being sampled to define the extent of "bad" water in the area by the Mn. Pollution Control Agency.

V. PRIORITY ASSESSMENT Hazard Assessment: medium

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - More Information and Part 3 - Description of Hazardous Conditions and Impacts) <input type="checkbox"/> A. HIGH (Inspection required promptly) <input type="checkbox"/> B. MEDIUM (Inspection required) <input checked="" type="checkbox"/> C. LOW (Inspect on the available basis) <input type="checkbox"/> D. NONE (No further action needed, complete current disposition form)			
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VI. INFORMATION AVAILABLE FROM

01 CONTACT Byron A. Adams	02 OF (Agency/Organization) Minnesota Pollution Control Agency	03 TELEPHONE NUMBER 16121296-7745
04 PERSON RESPONSIBLE FOR ASSESSMENT Byron A. Adams	05 AGENCY Mn PCA	06 ORGANIZATION Division of Solid and Hazardous Waste
07 TELEPHONE NUMBER 16121296-7745		08 DATE 6.1.87 MONTH DAY YEAR



**POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION**

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
01	01

Ma

H. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A SOLID ☐ E SLURRY
☐ B POWDER, FINES ☒ F LIQUID
☐ C SLUDGE ☐ G GAS
☐ D OTHER _____

02 WASTE QUANTITY AT SITE

(disclosure of waste activities
shall be confidential)

TONS

CUBIC YARDS Unknown

NO OF DRUMS

D3 WASTE CHARACTERISTICS (Check all that apply)

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> A TOXIC | <input checked="" type="checkbox"/> E SOLUBLE | <input type="checkbox"/> I HIGHLY VOLATILE |
| <input checked="" type="checkbox"/> B CORROSIVE | <input type="checkbox"/> F INFECTIOUS | <input type="checkbox"/> J EXPLOSIVE |
| <input type="checkbox"/> C RADIOACTIVE | <input type="checkbox"/> G FLAMMABLE | <input type="checkbox"/> K REACTIVE |
| <input checked="" type="checkbox"/> D PERSISTENT | <input type="checkbox"/> H IONTABLE | <input type="checkbox"/> L INCOMPATIBLE |
| | | <input type="checkbox"/> M NOT APPLICABLE |

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	Q1 GROSS AMOUNT	Q2 UNIT OF MEASURE	Q3 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
(ACD)	ACIDS	—		Source and quantities unknown.
BAS	BASES			
(MES)	HEAVY METALS	—		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

[illegible]

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, autopsy analyses, reports.)

1. MPCA Files, Preliminary Assessment/ Site Investigation files, Analytical Results
Haber Groundwater Contamination.
2. U.S.G.S. Quadrangles, Minnesota, Benton Co.; Goodhue West (1968), Zumbrota (1968),
Wanamingo (1968) and White Rock (1968, revised 1982).



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

NEW
I. IDENTIFICATION

01 STATE 02 SITE NUMBER

IN

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED

494

02 ☒ OBSERVED (DATE 6/1/87)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

Several domestic wells as defined in II, 02 have shown relatively low pH and high Nickel and Lead levels above MDH RAL's.

01 ☒ B. SURFACE WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED

unknown

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☒ C. CONTAMINATION OF AIR

03 POPULATION POTENTIALLY AFFECTED

unknown

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☒ D. FIRE/EXPLOSIVE CONDITIONS

03 POPULATION POTENTIALLY AFFECTED

unknown

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☒ E. DIRECT CONTACT

03 POPULATION POTENTIALLY AFFECTED

unknown

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☒ F. CONTAMINATION OF SOIL

03 AREA POTENTIALLY AFFECTED

unknown
(Acres)

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☒ G. DRINKING WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED

494

02 ☒ OBSERVED (DATE 6/1/87)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

within a three-mile radius of the first reported case of "bad" water in this area a house count of 130 homes was determined.

130 Homes x 3.8 residents = 494

01 ☒ H. WORKER EXPOSURE/INJURY

03 WORKERS POTENTIALLY AFFECTED

unknown

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

01 ☒ I. POPULATION EXPOSURE/INJURY

03 POPULATION POTENTIALLY AFFECTED

unknown

02 ☐ OBSERVED (DATE _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

new



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

Mn

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

Unknown

01 ☒ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (include names of species)

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

Unknown

01 ☒ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

Unknown

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES
(Spills, run-off/standing liquids, leaking drums)
03 POPULATION POTENTIALLY AFFECTED _____
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

Unknown

01 ☒ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

Unknown

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

Unknown

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

Unknown

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

No

III. TOTAL POPULATION POTENTIALLY AFFECTED: 494

IV. COMMENTS

High levels of Iron, Lead, Nickel, sulfate and low pH are present in at least three wells in the area of concern. At this time the extent of this problem is unknown and additional sampling and analysis of Area wells are under way. It is uncertain if the problem is due to natural causes or a contaminant

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Source.

References 1 & 2.

USGS

7.5 MINUTE

QUADRANGLES

WANAMINGO, WHITE ROCK, GOODHUE WEST, ZUMBROTA

